

REMARKS

Claims 1, 4 to 8, and 11 to 22 are now pending in the present application.

In view of the following, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Applicants respectfully request that the Examiner acknowledge acceptance of the Drawings and the claims for foreign priority.

Claims 1, 4 to 8, 11 to 22 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent 6,406,939 (“Lin”) in view of U.S. Patent Application 2003/0080392 (“Zuniga-Ortiz”) and U.S. Patent 6,372,539 (“Bayan”).

Claims 1, 4 to 8, 11 to 22 were also rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent 6,406,939 (“Lin”) in view of the “Background Information” (the characterization of the Background Information is not necessarily agreed with for purposes of this response).

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Also, as clearly indicated by the Supreme Court in *KSR*, it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *See KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). In this regard, the Supreme Court further noted that “rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.*, at 1396. Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art

reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Although the rejections may not be agreed with, to facilitate matters, claim 1, as presented, is to a method for producing a conductive layered coating on an insulating substrate, including: equipping, in selected regions, at least one surface of an electrically insulating substrate with a coating of an electrically highly conductive first metal, the coating being structured as conductor paths; cleaning the at least one coated surface; seeding the coating with seeds of a second metal; *depositing a first layer including an alloy of the second metal onto the coating seeded with the seeds of the second metal*; depositing a second continuous layer including the alloy of the second metal onto the coating seeded with the seeds of the second metal, the second continuous layer covering the first layer; firing the substrate deposited with the first and second layers of the second metal to form the conductive layered coating, the firing being performed so that the first metal is diffused with the second metal; and contacting a gold bonding wire to the conductive layered coating, wherein: the substrate includes a low-temperature co-fired ceramic (LTCC), the first metal includes silver, and the second metal includes palladium.

In particular, claim 1, as presented, specifically provides that a second continuous layer is deposited on top of a first deposited layer. The Lin, Zuniga-Ortiz and Bayan references do not disclose the feature of depositing of a second continuous layer that covers a first layer onto the seeded surface, as provided for in the context of the presently claimed subject matter. The Lin reference refers to the immersion of an IC chip in a plating bath for 2 minutes, but it does not disclose or suggest the feature of a process in which a first layer of seeding occurs before a second continuous layer is deposited. The cited text from Lin does not disclose (or even suggest) a method for seeding the coating of metal with seeds of a second metal, as provided for in the context of the claimed subject matter, and the Final Office Action does not address this issue. Similarly the Zuniga-Ortiz and Bayan references are also silent on the seeding process, and certainly do not disclose a process in which seeding the coating of metal occurs twice, as provided for in the context of the presently claimed subject matter.

As admitted on Page 3 of the Final Office Action, the Lin reference does not disclose that the substrate is subject to firing, and it therefore relies on Official Notice to

disclose the process of firing. In fact, the Lin reference does not disclose or suggest a method which is improved by a firing, and thus one skilled in the art would not be motivated to modify the Lin based on the secondary references. The Final Office Action also similarly relied on Official Notice as to the feature in which the second metal is diffused with the first metal, as neither Lin nor the secondary references disclose any such feature.

The Final Office Action did not address the previous request that specific evidence be provided via an affidavit or publish information supporting the Official Notice under 37 C.F.R. § 1.104(d)(2). (See MPEP § 2144.03). It is respectfully maintained that the taking of Official Notice in the present case is conclusory and unfounded and is therefore traversed.

Further, as to the “Background Information” (regardless of its proper characterization) does not disclose the features of firing and diffusing a first metal to a second metal. In particular, the Final Office Action points to the “Background Information” section which discusses LTCC as a “promising technology”. (See specification, page 1, lines 8-13). The discussion about LTCC in the “Background Information” discusses a glass-ceramic mixture that is heated along with a metallization paste. The particular section does not disclose the firing of two metals together, and certainly does not disclose or even discuss the diffusion of two metals together. For these reasons, the “Background Information” (regardless of its proper characterization) does not disclose either firing or diffusion of two metals, as provided for in the context of the presently claimed subject matter.

For the foregoing reasons, claim 1, as presented, is allowable, as are its dependent claims 4 to 8 and 19 to 22.

Claim 11 includes features like those of claim 1, as presented, and it is therefore allowable for essentially the same reasons, as are its dependent claims 9, 10, 12 to 18.

As further regards all of the obviousness rejections, any Official Notice is respectfully traversed to the extent that it is maintained and it is requested that the Examiner provide specific evidence to establish those assertions and/or contentions that may be supported by the Official Notices under 37 C.F.R. § 1.104(d)(2) or otherwise. In particular, it is respectfully requested that the Examiner provide an affidavit and/or that the Examiner provide published information concerning these assertions. This is because the § 103 rejections are apparently being based on assertions that draw on facts within the personal

knowledge of the Examiner, since no support was provided for these otherwise conclusory and unsupported assertions. (See also MPEP § 2144.03).

Accordingly, claims 1, 4 to 8 and 11 to 22 are allowable.

CONCLUSION

In view of the above, it is respectfully submitted that all of the presently pending claims 1, 4 to 8 and 11 to 22 are allowable. It is therefore respectfully requested that the rejections (and any objections) be withdrawn. Since all issues raised by the Examiner have been addressed, an early and favorable action on the merits is respectfully requested.

Respectfully submitted,

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